

## News

### ***Welcome!***

VDOE is pleased to announce that Dr. Tina Manglicmot is joining the Department of Instruction as the new Director of STEM. Dr. Manglicmot earned a doctorate in Education Policy, Planning, and Leadership from the College of William and Mary and has most recently served as the Supervisor for Instructional Technology and Innovation in Williamsburg-James City County Public Schools. Her previous experience as a biology, Earth science, applied chemistry, and marine biology teacher coupled with her extensive experience with designing and delivering professional development focused on learner objectives, differentiation, project-based learning, and other student-centered instructional delivery methods will make her a valuable resource for science and mathematics at VDOE.

### ***Recommended Article: How to Reduce Plastic Waste***

This online article and associated resources was recommended to VDOE by a middle school student in Colorado. The student, Christina, was conducting research for her class on companies and projects that are working towards cleaning up our Earth. She used the information found on our environmental literacy page and thought the article would be a good fit with the Virginia Environmental Literacy programs; she wanted to recommend it to teachers and students in the state of Virginia. Thank you, Christina! And thanks to her teacher, Rebecca Conner for sending us the information. Check out the [How to Reduce Plastic Waste](#) article!

### ***VJAS Judges Needed!***

The Virginia Junior Academy of Science is a competition that allows middle and high school students to present their original research to a juried panel of practitioners. This year's VJAS will be held at VCU in Richmond this year with student presentations on May 17. Judges will be needed for May 17. Readers for the papers will also be needed beginning March 1, 2017. Please consider volunteering at the following link: <http://www.vjas.org/judges-information.html> or <http://goo.gl/forms/wafNpG7nwi>

### ***Update: ESSA***

*The timeline for Virginia's submission of the accountability plan under ESSA has been extended and will be submitted in September. This change will allow for the alignment of the Virginia ESSA plan more closely with the accountability decisions that will be made by the Board of Education in early 2017.*

The [U.S. Department of Education](#) recently [announced final regulations](#) to implement the accountability, data reporting, and state plan provisions of the Every Student Succeeds Act (ESSA). The regulations allow states the flexibility to develop a plan designed to ensure a high-quality, well-rounded education that sets every student in America up for success in college and career.

For more information on the Virginia State Plan development process and an overview of ESSA changes, please visit the [VDOE website](#).

## Grants and Awards

### ***Chesapeake Bay Trust K-12 Environmental Education Mini Grants***

The Chesapeake Bay Trust is awarding up to \$5,000 in funding for organizations that conduct meaningful outdoor learning experiences. The grant program is open and the application deadline is **January 13, 2017**.

### ***Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) – Nominations Open – Grades 7-12***

The Presidential Awards for Excellence in Mathematics and Science Teaching is pleased to announce that the 2017 cycle for grades 7 – 12 has begun and the nomination process has been opened. Nominations close on April 1, 2017.

**PAEMST** are the nation's highest honors for teachers of mathematics and science (including computer science). Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of mathematics and science education. Since 1983, more than 4,700 teachers have been recognized for their contributions in the classroom and to their profession. If you know great teachers, nominate them to join this prestigious network of professionals. For more information on PAEMST or to nominate a teacher, visit the [PAEMST website](#).

## **Teacher Resources**

### ***KOOL Science***

This new STEM education outreach from the Kennedy Space Center offers classrooms a chance to connect with a professional educator from the KSC Visitor Complex for a live, hands-on STEM lesson focused on NASA and space exploration. KOOL Science workshops combine distance learning with hands-on activities that involve the students in a multisensory learning experience. Chroma key technology allows us to visit a variety of locations in and around KSC, exposing students to the sights and sounds of places like NASA's Vehicle Assembly Building. Because we connect Kennedy Space Center with the classroom via Skype TX web-conference, no special videoconferencing equipment is needed. As long as the classroom has a computer with internet access and a means to project audio and video, the entire class can participate.

Workshop topics currently include Newton's Laws of Motion, the Earth-Moon-Sun system, maintaining homeostasis in microgravity, luminescence, a virtual guided tour of KSC, and NASA-inspired engineering design challenges. Each 45-minute session includes a Teacher's Guide with a materials list, student logbook masters, evaluation tools, answer keys, lesson objectives, and national standards. Most lessons are geared toward grades 5-8, but can be adapted for use by older and younger students as well.

Additional information is available on our website at <https://www.kennedyspacecenter.com/camps-and-education/kennedy-online-outreach-and-learning>.

### ***New mid-Atlantic Guide to Aquatic Invasive Species***

The just-released "Mid-Atlantic Field Guide to Aquatic Invasive Species" is designed to aid interested field professionals and others in learning general information about AIS, identifying problem species, collecting specimens for verification, and reporting new infestations. The 99 species included in the field guide were selected by MAPAIS members and other experts from the Mid-Atlantic region to reflect species of greatest concern within the region. The lower link is over 200 MB, so it takes a while to download. The upper link is greatly reduced and appropriate for viewing or reading online (200 pages).

<http://seagrant.psu.edu/topics/new-mid-atlantic-field-guide-ais-here>

[http://seagrant.psu.edu/sites/default/files/MAP%20AIS%20Aquatic%20Invasive%20Species%20Guide%20Pro of reduced.pdf](http://seagrant.psu.edu/sites/default/files/MAP%20AIS%20Aquatic%20Invasive%20Species%20Guide%20Pro%20of%20reduced.pdf)

## **Student Opportunities**

### ***BLAST 2017- Building Leaders for Advancing Science and Technology***

Blast is a partnership between Virginia, Space Consortium, Old Dominion University, University of Virginia, Virginia Tech, and the Commonwealth of Virginia that provides current 8<sup>th</sup> and 9<sup>th</sup> grade Virginia students a summer leadership residential experience. Students who have a desire to explore science, technology,

engineering, and mathematics are encouraged to apply. Blast offers a free, dynamic three days residential summer experience at the different partnering universities. For more information, please go to [www.blast.spacegrant.org](http://www.blast.spacegrant.org). The deadline for applications is **February 6, 2017**.

### ***National Youth Science Camp***

The National Youth Science Camp (NYSC) is an intense month-long camp for young scientists conducted during the summer after they graduate from high school. In a rustic setting in West Virginia, students from around the country are challenged academically in exciting lectures and hands-on studies on current science topics. The program also offers participants the opportunity to experience a wide variety of outdoor activities that have minimal impact on the environment and are challenging for the experienced but accessible to those who have never participated in outdoor excursions. The NYSC is an all-expenses-paid program. The National Youth Science Foundation will arrange round trip transportation from an airport near the delegate's home to Charleston, West Virginia. Information about the National Youth Science Camp and an application may be obtained at the [National Youth Science Camp](#) Web site. The application must be submitted through the NYSC Web site by **March 1, 2017**.

## **Inquiry Corner**

### ***Music and Sound***

#### Condition:

Given a horizontal workspace, a choice of materials such as vibrating strings, rubber bands, beakers/bottles or air and water, tubes (as in wind chimes) and other common materials

#### Behavior:

Students will design and conduct an investigation to determine what factors affect the pitch of a vibrating object.

#### Success Criteria:

#### **Prior to experimentation the students will synthesize an experiment to include:**

- a detailed procedure that includes specific equipment needed in the experiment.


**\*\*At 4<sup>th</sup> grade** the development of the procedure may need to be scaffolded for different student groups. Scaffolding may include class brainstorming of independent and dependent variables, teacher modeling how to create a set of procedures; and having students order a set of steps in creating a procedure.

#### **Upon completion of the experiment, the students will analyze the experiment to include:**

- a table that includes data collected in the experiment and a graph of the data (if appropriate);
- an explanation of the data observed;
- an appropriate conclusion based on the data collected;
- an oral presentation of the group describing their experimental procedures and conclusion;
- a written explanation of the factors that affect the pitch of a vibrating object; and
- any sources of error that may have been encountered in the experiment and how those errors may impact the experimental results.

## **Highlighted Superintendent's Memos**

- MEMO 290-16  
[2017 National Youth Science Camp \(NYSC\)](#)

- MEMO 282-16  
[Presidential Awards for Excellence in Mathematics and Science Teaching \(PAEMST\) Program](#)
- MEMO 284-16  
[New Local Alternative Assessment Guidelines](#) 

## Contact Us

As always, please contact one of VDOE Science Team if you have questions.

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